REMARKS

In the amendment, the Applicant has amended the specification to reflect the fact that this application is a national phase of the international application. In addition, the Applicant has cancelled without prejudice original claims 1-19 and added new claims 20-38, respectively. The wording of the new claims corresponds to the amendments to the claims effected during prosecution of the international application. In addition, the Applicant has revised the multiple dependencies of the claims to eliminate the improper multiple dependencies and to reduce the PTO filing fee.

Favorable action on the merits is solicited.

Respectfully submitted,

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Version with Markings to Show Changes Made

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	:	
Martin Hermann Klemens BRUNE et al.	:	**Group Art Unit 1652**
Serial No. 09/937,296	:	Examiner D. Steadman
Filed November 14, 2001	:	Confirmation No. 9738

ASSAYS FOR NUCLEOSIDE DIPHOSPHATES AND TRIPHOSPATES

AMENDMENT

Assistant Commissioner for Patents,
Washington, DC 20231

Sir:

Responsive to the Official Action dated June 24, 2002, the time for responding thereto being extended for one month in accordance with a petition for extension submitted concurrently herewith, please amend the above-identified application as follows:

IN THE CLAIMS

Cancel without prejudice claims 22 and 23.

Please amend the claims as follows:

20. (Twice Amended) A process for detecting the presence of a nucleoside diphosphate in a sample, comprising a step of detecting the dephosphorylation of the phosphoenzyme form of a nucleoside diphosphate kinase (NDPK), wherein the NDPK is modified to carry an extrinsic label in both the NDPK's ~~its~~ phosphorylated and unphosphorylated forms, which label gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated.

21. (Twice Amended) A process for detecting the presence of a nucleoside triphosphate in a sample, comprising a step of detecting the phosphorylation of a nucleoside diphosphate kinase (NDPK) to the phosphoenzyme form, wherein the NDPK is modified to carry an extrinsic label in both ~~its~~ the NDPK's

phosphorylated and unphosphorylated forms, which label gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated.

24. (Amended) The process of claim 20 or claim 21, wherein the NDPK carries a fluorescent label.

Twice an extrinsic the NDPK's

31. (Amended) NDPK which is modified to carry ~~a~~ label in both ~~its~~ phosphorylated and unphosphorylated forms, which label gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated.

(Amended)

30. The process of claim 20 or claim 21, wherein the NDPK is ~~the~~ an NDPK of *Myxococcus xanthus* having the amino acid sequence of SEQ ID NO: 2 ~~carrying a Asp112→Cys mutation~~, and carrying an IDCC label at ~~this mutated residue~~ position 112.

31. NDPK is modified to carry a label which gives a different detectable signal when the enzyme is phosphorylated from when it is unphosphorylated.

32. The NDPK of claim 31, wherein the label on the modified NDPK is a fluorescent label.

33. The NDPK of claim 32, wherein the fluorescent label is attached to the NDPK via a cysteine residue.

34. The NDPK of claim 32 or claim 33, wherein the fluorescent label is IDCC.

(Amended)

35. NDPK of *Myxococcus xanthus* having the amino acid sequence of SEQ ID NO:2 ~~carrying a Asp112→Cys mutation~~, and carrying an IDCC label at ~~this mutated residue~~ position 112.

36. NDPK modified by the attachment of at least one detectable label that is sensitive to the binding of a nucleoside diphosphate.

37. A substrate having the NDPK of any one of claims 31, 35 or 36 immobilised thereto.

38. The NDPK of any one of claims 31, 35 or 36 for use as an *in vivo* or *in vitro* diagnostic reagent.